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Lichens from the Amasya, Çorum, and Tokat regions of Turkey

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Abstract — A total of 209 taxa were identified from 20 sampling stations in the Turkish provinces of Amasya, Çorum, and Tokat. 165 taxa are reported as new from Tokat, 63 for Amasya and 56 for Çorum. Three taxa, *Leptorhaphis parameca*, *Ramalina pontica,* and *Seirophora contortuplicata,* are newly recorded for Turkey. For each taxon, habitat and distributional data are presented. The complete checklist is available on http://www.mycotaxon.com/resources/weblists.html

Key Words — biodiversity, lichenized fungi, biota, new records

Introduction

An increasing number of studies on the lichen biota of Turkey have been carried out in the last decade (Aslan et al. 2002, Candan & Özdemir Türk 2008, Güvenç et al. 2006, Halıcı et al. 2007, John et al. 2000, John & Breuss 2004, Kınalıoğlu 2008, Oran & Öztürk 2006, Tufan et al. 2005). Nevertheless, large gaps remain in the knowledge of lichen distribution in Turkey. Among the particularly neglected areas are Amasya, Çorum, and Tokat. Few publications report any lichens for Amasya or Çorum (John 1999, 2000, John et al. 2000, Çobanoğlu & Akdemir 2004, Leuckert & Kümmerling 1991, Lumbsch & Feige 1999, Steiner 1916, Verseghy 1982). For Tokat no published lichen records seem to exist so far. Here data are contributed from Amasya, Çorum, and Tokat, situated in the central part of the Black Sea region of Turkey (Fig. 1), based on collections from 20 sites visited on 5 October 2007 and 1 January 2008. Table 1 shows descriptions of Amasya, Çorum, and Tokat provinces.

Materials and methods

The collections were identified with various lichen guides (Brodo et al. 2001, Purvis et al. 1992, Wasser & Nevo 2005, Wirth 1995). Air-dried samples were examined using a stereomicroscope and a light microscope. Vouchers are deposited in the herbarium of the Faculty of Science and Arts, Giresun University, Giresun, Turkey; duplicates of some specimens studied by Etayo and Sipman in herb. Etayo and B, respectively.

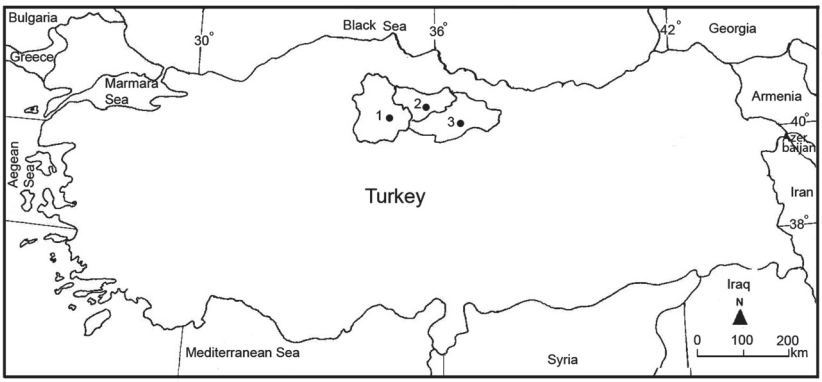

Fig. 1. Provinces from which the samples are collected: 1. Çorum, 2. Amasya, 3. Tokat.

Results and discussion

The list contains three species that are newly recorded for Turkey: *Leptorhaphis parameca, Ramalina pontica,* and *Seirophora contortuplicata*. *Leptorhaphis parameca* is an inconspicuous, doubtfully lichenized species known from various sites in Europe and North America (Nimis 1993) that has probably been overlooked so far in Turkey. *Ramalina pontica* is known so far only from the type locality in Romania (Vězda 1975), and its discovery in Turkey supports the hypothesis that it is an endemic from the Black Sea region, as its name suggests. Remarkably the locality is rather far from the coast. By TLC usnic and evernic acids were found (Sipman, pers. comm.). *Seirophora contortuplicata* is a rather widespread, small-foliose lichen of sunny vertical rock faces in the southern European mountains, which extends to Central Asia (Nimis 1993). It was recently reported from Iran (Seaward et al. 2008) and is probably widespread in the mountains of Turkey.

Among the further reported species, *Diploschistes candidissimus*, *Lecanora laatokkaensis*, *L. sambuci*, *Opegrapha herbarum* and *Staurolemma omphalarioides* have rarely been recorded in Turkey until now. *Diploschistes candidissimus* is known throughout Southern Europe, Asia (Egypt, India, Israel), North America, Africa, and Australia (Wasser & Nevo 2005). In Turkey, it was previously recorded only from Trabzon (John & Breuss 2004). *Lecanora laatokkaensis* (after Nimis 1993) is a widespread, but rather small and easily overlooked, lichen in the northern hemisphere. In Europe it is found mainly in the Mediterranean mountains but also in Karelia. In Turkey, *L. laatokkaensis* was previously recorded from Elazığ, Malatya (Candan & Özdemir Türk 2008). *Lecanora sambuci* is known from Europe and North America (Purvis et al. 1992). In Turkey, it was previously recorded from Bursa (Oran & Öztürk 2006, Güvenç et al. 2006) and Uşak (Kınalıoğlu 2008). *Opegrapha herbarum* is rather

Table 1. Descriptions of Amasya, Çorum and Tokat provinces.

	Amasya	Tokat	Çorum
Area	5690 km^2	9958 km^2	12,820 km^2
Altitudinal range	190–2062 m	188–2385 m	200–2097 m
Climate (Mediterranean)	semi-arid, cold	semi-arid, cold	semi-arid, very cold
Annual rainfall	430.8 mm	442.9 mm	420.7 mm
Warmest month	August (30.4°C)	August (28.5°C)	July (28.7°C)
Coldest month	January (–0.6°C)	January (–0.4°C)	January (–4.2°C)
Dominant vegetation	*Pinus*, *Quercus*	*Abies, Carpinus, Quercus*, *Pinus, Populus*	steppe, *Quercus, Pinus*
Geological composition	Cretaceous, Jurassic, Neogene, Holocene	Holocene, Eocene	Holocene, Permian, Mesozoic

widespread in Europe, Australia, and North America (Purvis et al. 1992), while in Turkey it was previously recorded only from Bursa (Oran & Öztürk 2006) and Zonguldak (Yazıcı 2007). *Physcia wainioi* appears to have also a wide distribution throughout the northern hemisphere but it is not always properly recognized. In Europe it is more common in the Mediterranean (Nimis 1993), a pattern that fits well to its presence in Turkey. In Turkey, *P. wainioi* was previously recorded from Aydın (Nimis & John 1998) and Ordu (John et al. 2000). *Staurolemma omphalarioides* is so far known to have a mediterranean-atlantic distribution in Europe. It is said to be common in Italy (Nimis 1993) and is also reported from the Cape Verde islands. In Turkey, *S. omphalarioides* was previously recorded only from Antalya (Tufan et al. 2005). Its occurrence in Turkey forms a connection to the reported presence in Iran (Seaward et al. 2004).

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